

Comparisons of Job Characteristics

Focus Occupation: **Machinists (51-4041)**

Associated Occupation: **Industrial Machinery Mechanics (49-9041)**

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 91

Focus Occupation: Machinists (51-4041)

Associated Occupation: Industrial Machinery Mechanics (49-9041)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Mechanical	6.8	20.1	18.0	< Expanded education and/or training may be required
Engineering and Technology	5.7	13.0	10.2	< Expanded education and/or training may be required
Design	5.2	11.5	11.2	0 Current knowledge level may be sufficient
Building and Construction	4.0	9.7	3.4	<< Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 78

Focus Occupation: Machinists (51-4041)

Associated Occupation: Industrial Machinery Mechanics (49-9041)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Repairing	3.4	15.6	8.5	<< Extensive development of skills in this area may be required
Equipment Maintenance	3.5	14.6	9.3	<< Extensive development of skills in this area may be required
Operation Monitoring	6.6	14.2	12.0	< A higher skill level may be required
Troubleshooting	4.5	13.6	10.2	<< Extensive development of skills in this area may be required
Quality Control Analysis	5.9	12.3	12.6	0 Current skill level may be sufficient
Operation and Control	5.4	11.6	11.1	0 Current skill level may be sufficient
Equipment Selection	3.3	9.8	8.6	< A higher skill level may be required
Installation	1.7	6.4	6.0	0 Current skill level may be sufficient

Technology Design	2.6	5.2	6.0	>	Skill level is likely sufficient
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The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 79			
Focus Occupation: Machinists (51-4041)					
Associated Occupation: Industrial Machinery Mechanics (49-9041)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Reaction Time	4.8	13.9	10.1	<<	Extensive improvement in abilities may be required
Control Precision	6.6	12.9	13.3	0	Current ability level may be sufficient
Manual Dexterity	6.5	12.6	11.1	<	Some improvement in abilities may be required
Hearing Sensitivity	5.6	12.1	9.3	<<	Extensive improvement in abilities may be required
Finger Dexterity	7.6	11.9	11.6	0	Current ability level may be sufficient
Multilimb Coordination	6.0	11.5	10.7	0	Current ability level may be sufficient
Auditory Attention	5.9	11.2	8.7	<	Some improvement in abilities may be required
Visual Color Discrimination	6.4	10.6	6.7	<<	Extensive improvement in abilities may be required
Speed of Limb Movement	3.2	7.7	6.1	<	Some improvement in abilities may be required
Wrist-Finger Speed	3.2	7.3	7.3	0	Current ability level may be sufficient
Sound Localization	2.2	6.5	6.2	0	Current ability level may be sufficient
Glare Sensitivity	2.6	6.2	3.3	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 81
Focus Occupation: Machinists (51-4041) Associated Occupation: Industrial Machinery Mechanics (49-9041)		
Work Activities	Exclusivity of Activity	
Adjust production equipment/machinery setup	25	
Fabricate, assemble, or disassemble manufactured products by hand	11	
Identify base metals for welding	68	
Install equipment or attachments on machinery or related structures	48	
Maintain or repair industrial or related equipment/machinery	39	
Maintain welding machines or equipment	70	
Move or fit heavy objects	8	

Program computer numerical controlled machines	89
Read blueprints	10
Read specifications	23
Read technical drawings	7
Set up and operate variety of machine tools	62
Set up computer numerical control machines	69
Understand technical operating, service or repair manuals	6
Use arc welding equipment	62
Use hand or power tools	2
Use knowledge of metric system	39
Use robotics systems technology	78
Weld together metal parts, components, or structures	54

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 93

Focus Occupation: Machinists (51-4041)
Associated Occupation: Industrial Machinery Mechanics (49-9041)

Tools and Technologies	Exclusivity
Aerial lifts	13
Bandsaws and accessories	26
Business function specific software	1
Computer printers	2
Computers	1
Content authoring and editing software	1
Cutting and crimping and punching tools	3
Cutting tools	18
Face and head protection	7
Forming tools	2
Holding and clamping tools	3
Industry specific software	1
Ladders and scaffolding	6
Length and thickness and distance measuring instruments	2
Lifting equipment and accessories	3
Machine tools	7
Machinery for working wood and stone and ceramic and the like	12
Measuring and layout tools	3
Mechanical instruments	14
Metal bending and forming machinery	17
Metal working machinery attachments	35
Pneumatic tools	8
Power tools	2
Prying and bending tools	10

Rough and finishing tools	5
Sealing tools	21
Soldering and brazing and welding machinery and supplies	6
Tool attachments and accessories	12
Viewing and observing instruments and accessories	4
Vision protection and accessories	3
Wrenches and drivers	2

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.